

# The Social Norm of Tipping: A Review

Ofer H. Azar<sup>\*</sup>

Department of Economics  
Northwestern University

## Abstract

Tipping is an important phenomenon, both because of its economic magnitude and because of the insights it suggests about economic behavior in general. It is closely related to several areas in economics, including labor economics, industrial organization, social economics, behavioral economics, and public policy. Unfortunately, no published article integrates and synthesizes the research on tipping. This makes it hard for scholars to get an overview of this research area without reading dozens of articles. The purpose of this article is therefore to give the readers the state of the art in the research on tipping. In addition to summarizing and synthesizing the previous research on tipping, the article includes many original ideas and suggests topics for future research.

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<sup>\*</sup> Ofer H. Azar, Department of Economics, Northwestern University, 2001 Sheridan Road, Evanston, IL 60208, USA. E-mail: [o-azar@northwestern.edu](mailto:o-azar@northwestern.edu). Tel.: +1-847-491-9593, fax: +1-847-491-7001.

## I. INTRODUCTION

Tipping is an important phenomenon, both because of its economic magnitude and because of the insights it suggests about economic behavior in general. Future service considerations cannot explain tipping by one-time customers, and thus tipping is a phenomenon that demonstrates the importance of psychological and social motivations in economic behavior, as it is inconsistent with the assumption of selfish agents. People tip mainly because it is the social norm and because stiffing (not tipping) causes negative feelings such as embarrassment and guilt. Social norms and feelings are also major motivations for other economic behaviors, such as gift giving and donations. Therefore, better understanding of tipping may also provide insights about other economic phenomena.

Moreover, tipping is important by itself as well. Tips in US restaurants alone are around \$26 billion a year (Azar, 2003a). This number does not include tips in other establishments such as hotels and taxis, and it refers to the United States alone; annual worldwide tips are therefore much higher. In addition, millions of workers, especially in restaurants but in other establishments as well, depend heavily on tip income.<sup>1</sup> Tipping has become prevalent in numerous occupations: Lynn, Zinkhan and Harris (1993), for example, consider 33 service professions that are tipped.<sup>2</sup> In fact, tipping is much more than a single phenomenon, and

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<sup>1</sup> Full-service restaurants in the United States alone employ 3.8 million workers (U.S. Census Bureau, *Statistical Abstract of the United States: 2001*, Table No. 1263; the numbers for 2001 are a projection). Many of these workers derive a significant portion of their income, often most of it, from tips.

<sup>2</sup> The lion's share of the literature is about tipping in restaurants, which is the most common form of tipping. Most of the findings and ideas discussed in the article, however, are applicable to tipping in other situations as well.

different forms of tipping have very different characteristics: Azar (2002a), for example, divides tipping occasions into six categories: reward-tipping, price-tipping, tipping-in advance, bribery-tipping, holiday-tipping and gift-tipping, and discusses the economics of each category.

Tipping has implications to several fields in economics and management (see Azar (2003a) for a detailed discussion). Being a major source of income for millions of workers, tipping has implications for labor economics. Tipping can be thought of as monitoring by the buyers, and the firm has to choose its direct monitoring according to the efficiency of tipping in motivating workers. Firms can also replace tips with fixed service charges. In addition, tips were recently suggested as a potential source of revenues for firms that post intellectual property on the Internet (Woodhead, 2000). These issues suggest that some aspects of tipping are related to industrial organization. People tip mainly because this is the social norm and violating it results in feelings of embarrassment and unfairness. In addition, people may tip because they derive utility from feeling kind and generous (i.e., tipping is a means of self-signaling and improving one's self-image). Therefore, tipping is closely related to social and behavioral economics. Tipping also raises policy questions. Should tipped workers receive minimum wages in addition to their tips? Should income tax and social security payments be imposed on tips in the same manner that they apply to wages?

While a lot of research was done on tipping in the last two decades, no published article integrates and synthesizes this research. This makes it hard for scholars to get an overview of this research area without reading dozens of articles. The purpose of this article is therefore to give the readers the state of the art in the research on tipping; I hope that some of them will find this topic so interesting that they will add to the growing body of literature on tipping. Therefore, in

addition to summarizing and synthesizing the previous research on tipping, I add many original ideas and suggest topics for future research.

## **II. THEORETICAL RESEARCH ABOUT TIPPING**

The first to offer an economic model of tipping were Ben-Zion and Karni (1977). They built a theoretical framework for a repeated interaction between a customer who chooses how much to tip and a service agent who chooses how much effort to provide. They showed that the marginal reward for effort must be positive for the service agent to provide more than the minimal effort level. They also proved that tips tend to be smaller when turnover of customers or service staff is higher and when customers visit the establishment less frequently. They concluded that tips are consistent with self-interest seeking behavior only for the case of repetitive customers, and that in order to explain why one-time customers tip one should consider altruistic behavior and social norms, which are not included in their model.

Azar (2002b) does so and incorporates social norms and feelings of fairness and generosity in the utility function of the customer. He examines whether tipping improves service quality and increases social welfare. The major determinant of the resulting equilibrium is the slope of the tip with respect to service quality (the slopes of the social norm and of the customer's tipping function turn out to be the same). When the slope is high (i.e. the norm is to tip poorly for bad service), tipping can serve as a good monitoring mechanism and support a high-quality equilibrium. The lower the slope is, the lower and farther away from social optimum is the resulting service quality. Except for extreme cases, however, tipping improves social welfare.

Azar (2003b) goes further to examine not only how tipping affects the worker, but also how it affects the firm. He examines the optimal choice of monitoring intensity by the firm when

workers receive tips (or other incentives that are not firm-provided). Increase in the sensitivity of tips to service quality reduces optimal monitoring intensity but nevertheless increases effort and profits unambiguously. The model explains why US firms supported the establishment of tipping in the late 19<sup>th</sup> century but raises the possibility that European firms make costly mistakes by replacing tips with service charges.

Sisk and Gallick (1985) consider tips and commissions and argue that tips ultimately protect the buyer from an unscrupulous seller (or his agent) when the brand-name mechanism for assuring contractual performance is insufficient. Their analysis suggests that differences in the ratio of tip to the marginal cost of the service across customers do not necessarily indicate price discrimination, but rather may result from implicit contracting which reduces marketing or search costs. Schwartz (1997) shows that tipping may increase the firm's profits when consumer segments differ in their demand functions and their propensity to tip. Jacob and Page (1980) examined a broader issue, of buyer monitoring in general, and concluded that certain firms will use both buyers and owners to supervise employees. Ruffle (1999) presents a theoretical model about gift giving and discusses briefly how the model can be applied to tipping as well.

Azar (2002c) presents an economic model that incorporates the disutility suffered by customers when they disobey the tipping norm, and allow tipping to be motivated also by future service considerations. The model predicts that if future service is a reason for tipping, then the sensitivity of tips to service quality increases in patronage frequency. Surveys of restaurant customers, however, are inconsistent with this prediction, implying that future service is not a reason for tipping. Azar (2003c) discusses the reasons for tipping from another perspective. He presents a model of the evolution of social norms and shows that when a norm is costly to follow and people do not derive benefits from following it except for avoiding social disapproval, the

norm erodes over time. Tip percentages, however, increased over the years, suggesting that people derive benefits from tipping, such as impressing others and improving their self-image as being generous and kind.

Several empirical papers introduced simple theoretical frameworks to help interpret their empirical findings. Bodvarsson and Gibson (1994) developed an economic model in which the customer tips according to the service quality, quantity, and the probability of transacting with the server in the future. The server has two supply functions, one for quantity of service and the other for service quality. These functions depend on the expected tip, the server's opportunity costs, and the probability the server assigns to serving the customer in the future. The equilibrium is not solved for, however. Bodvarsson and Gibson (1997) adopted a different theoretical approach, modeling the tipping event by means of a game theoretic model in which the customer's payoff is a function of whether he tips and whether others tip. Conlin, Lynn and O'Donoghue (2003) describe the tipping event as an interaction between a waiter and a customer, where the customer's utility depends on the deviation of his tip from the norm. Their paper focuses on testing empirically whether the social norm of tipping resembles the efficient contract that waiters and customers would want to sign in the absence of the large transaction costs involved. They find that tipping exhibits elements of efficiency but is not fully efficient.

### **III. EMPIRICAL RESEARCH ABOUT TIPPING**

Most of the literature about tipping is empirical, about tipping in restaurants, and consisted of two main types of papers: in one, waiters cooperate with the researcher, behave in a certain way (for example, squat when they introduce themselves) and record the effect of different behaviors on tips. In the second common paper type, the researcher interviews customers as they

leave the restaurant and records certain variables (bill size, tip size, service quality and group size are often included, in addition to other variables), and analyzes how different variables affect the tip size.

It is worthwhile to mention that while most of the studies are based on small datasets (about 100-200 customers each), several papers are based on much larger datasets and therefore their conclusions may be more valid. These papers include Bodvarsson and Gibson (1997), which is based on a dataset of 697 customers in seven Minnesota restaurants<sup>3</sup>, the meta-analysis by Lynn and McCall (2000) that combines seven published and six unpublished studies involving 2547 dining parties at 20 different restaurants, and Conlin, Lynn and O'Donoghue (2003) that includes 1998 observations from 39 restaurants in Houston, Texas.<sup>4</sup>

Another method used by a few empirical studies is to ask people hypothetical questions about their tipping behavior under certain conditions (e.g. Bodvarsson and Gibson, 1999). Also interesting are the experiments reported in Ruffle (1998), in which the participants acted in a way that resembles tipping in dictator and ultimatum games. Another interesting approach is to try to gain insights about tipping from its history, as Azar (2003d) does: based on the early history of tipping, he tries to answer why people tip, and whether tipping induces higher service quality. He concludes that the reasons for tipping changed somewhat over the years, but conforming to social norms and avoiding embarrassment were generally the main reasons. Tipping seems to improve service quality, though the extent of the improvement varies across occupations.

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<sup>3</sup> Unless noted otherwise, I report their results from the first column of table 5.

<sup>4</sup> Unless noted otherwise, I report the results from Table 3, column (5).

An important question about social norms is whether they are created to increase welfare; Azar (2003e) addresses it empirically by examining the characteristics of tipped and non-tipped occupations. Tipping prevalence is negatively correlated with worker's income and consumer's monitoring ability and positively with consumer's income and closeness between the worker and consumer. The results refute a common belief stating that tipping exists when it lowers monitoring costs. Tipping, however, is more prevalent when consumers feel empathy and compassion for workers and want to show gratitude for good service. Considering the utility consumers derive from improved self-esteem, tipping emerges where it increases welfare.

In the rest of this section I review the findings of many studies about tipping and divide the discussion according to different variables that might affect tipping. Since many papers discuss the relationships between tip size and several other variables, the exposition will be much clearer by discussing one variable at a time rather than one study at a time. In several cases I add my own analysis to the empirical evidence, especially when the evidence suggests insights about the fundamental question of why people tip.

### Service Quality

Whether service quality plays a role in the determination of tip size is one of the most important questions, since the answer to this question may imply whether or not tipping serves its presumed purpose, namely to encourage workers to render excellent service. If it is the case that tipping is not related to the quality of service, tips no longer serve as an incentive to provide excellent service. It is not clear then what advantage tipping has over fixed service charges.

Lynn and McCall (2000) found statistically significant and positive relationship between service evaluations and tip sizes; the effect of service on tips was small, however, accounting for



less than two percents of the variability in tip percentages.<sup>5</sup> They also discovered that tipping was not significantly related to servers' or third-parties' evaluations of the service. This result is very important as it might drive servers to think that tips are not related to the service quality they provide, eliminating their incentive to exert effort and resulting in inefficiency of tipping as an instrument to improve service quality. In order to support a causality argument, i.e. that customers tip more for good service, the study examines and refutes three alternative explanations for the positive correlation between service quality and tip size. Lynn and Graves (1996) also find a positive but correlation but small in magnitude between tips and service evaluation.

Conlin, Lynn and O'Donoghue (2003) found that each extra point on a service measure scale of 1-5 adds 1.49 to the tip percentage (i.e. increases the tip in 1.49 percent of bill size). This service measure is consisted of five different characteristics of the waiter (ranked by the customers): appearance, knowledge, friendliness, speed of service and attentiveness. When considering each of the components separately, however, friendliness and speed of service have statistically significant positive coefficients (1.65 and 1.46), while appearance and attentiveness have negative coefficients that are not statistically significant, and knowledge has statistically significant negative coefficient (-1.05).<sup>6</sup> The latter result is surprising, as it suggests that diners tip less when they consider their waiter more knowledgeable.

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<sup>5</sup> They mention, however, that in the studies that used customer ratings of service on multi-item scales (which are more valid and reliable), this number approached 5%.

<sup>6</sup> Based on Table 3, column 1.

Bodvarsson and Gibson (1997) found positive correlation between service quality and tip size in five out of seven restaurants (in three the correlation was statistically significant), but negative correlation in two restaurants. Combining the results from all restaurants, those who valued the service as 5/5 tipped 0.44 percent of bill size more than those who ranked the service as lower (usually 4/5). Similarly, Lynn and Grassman (1990) found positive correlation between service ratings and tip size. Rogelberg, Ployhart, Balzer and Yonker (1999) found that service quality affected tipping decisions of college students in some cases. Lynn and Simons (2000) interviewed waiters about their characteristics and examined their tip earnings in lunches and dinners, and found that better service providers can earn higher tips in evenings but not at lunch.

Several studies suggest that service quality is a major determinant of tips, contradicting others that imply that service affects tips very little (for example Lynn and McCall, 2000; Bodvarsson and Gibson, 1997). Lynn (2001) reports about a national survey, in which 54.5% of respondents claimed that the best explanation for why they do or do not tip restaurant waiters had to do with the quality of the service received. No other explanation was near this level of endorsement. This result should be taken cautiously, however, since research shows that people are poor at identifying the causes of their own actions (Lynn, 2001). Moreover, self-justification may contribute to the result as well. To illustrate this point, suppose that a customer who leaves a restaurant without tipping is asked by a researcher why he did not tip. He is likely to answer that the service was poor, not that he is mean or that he does not intend to visit this restaurant again and therefore has no incentive to tip. To a large extent, the same applies to a survey that asks people why they do or do not tip waiters in general.

Bodvarsson and Gibson (1999) conducted interviews with students in two universities<sup>7</sup>. In St. Cloud State University in Minnesota students reported that they would tip 6, 13.1 and 19.1 percent for poor, satisfactory and very good service. In the University of Lethbridge in Alberta the numbers were 3.7, 11.4 and 18.4 percent. Comparing these results with those of studies that interview diners after actual dining experiences (in which the effect of service quality on tips is minimal, not more than 2-3 percent of the bill size in general) is puzzling. Why are the results so different? One explanation I want to suggest is that people would like to tip according to the service quality. When asked about it hypothetically, they therefore indicate a large sensitivity of tips to service quality. When faced with an actual tipping situation, however, the social pressure and the embarrassment that one feels when he tips poorly bring people to tip for poor service more than they thought they would tip when asked about it hypothetically. This explanation is supported by the results of an on-line poll conducted on [www.tipping.org](http://www.tipping.org): on the question “Do you feel pressured to tip at a restaurant even if you feel you received bad service?” 70 percent (of 3332 respondents) answered positively. Yet, if people are fully rational, they should expect to be pressured to tip even for bad service. The difference between their hypothetical tipping behavior and their observed behavior may therefore be a result of bounded rationality: even though most people experience tipping frequently, they still think they would tip differently than they eventually do.

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<sup>7</sup> I report their results for “dining with a friend and a \$20 bill.” The results for “dining alone and a \$10 bill” are similar.

Finally, not all studies find positive correlation between quality and tips: Lynn and Latane (1984) observed in two studies that tipping was not related to service quality or to waitperson's efforts.

### Patronage Frequency

Lynn and McCall (2000) and Conlin, Lynn and O'Donoghue (2003) found significant and positive correlation between patronage frequency and tip size. Lynn and Grassman (1990) found correlation between patronage frequency and tip size, and also between tip size and the interaction of bill size with patronage frequency. They did not find, however, correlation between tipping and the interaction of patronage frequency with service ratings. Bodvarsson and Gibson (1994) and Conlin, Lynn and O'Donoghue (2003) also did not find correlation between tips and the interaction of patronage frequency with service quality. That is, the tips given by frequent patrons are not more or less sensitive to service quality than those given by others. If one assumes that the waiters are aware of the service quality they provide, frequent patrons have an incentive to discipline the waiters by tipping poorly for bad service. Since they do not do so more than non-frequent customers, it implies that receiving good service in the future is not a major reason for why people tip.

Bodvarsson and Gibson (1997) found in all seven restaurants that regular customers (who patronized the restaurant at least once a month) tip more than non-regular patrons, but in only two of the seven restaurants the difference was statistically significant. On average, regular patrons tipped 1.05 percents more (of bill size) than others. Kahneman, Knetsch and Thaler (1986) interviewed people over the phone with two alternative questions. One question was "If the service is satisfactory, how much of a tip do you think most people leave after ordering a

meal costing \$10 in a restaurant that they visit frequently?” and the other question started the same but ended “... in a restaurant on a trip to another city that they do not expect to visit again?” The mean responses were \$1.28 and \$1.27 (the number of observations was 122 and 124). These answers indicate that people do not think that repeated customers tip more.

### Bill Size

This is clearly the least controversial variable. Since tips in restaurants are usually computed as a percentage of the bill, it is not surprising that tip size is positively correlated with bill size. A few examples to papers that explicitly get this result empirically are Freeman, Walker, Borden and Latane (1975), Lynn and Grassman (1990), and Rogelberg, Ployhart, Balzer and Yonker (1999). Bodvarsson and Gibson (1997) conclude, “The bill size is most important in determining the tip,” and obtain a coefficient of 0.14 for the bill size in a regression of tip (in dollars) on bill size and other variables.

The more interesting question regarding the bill size is not whether it affects the amount of tips, but rather if it affects percentage of tips, and if yes, in what direction (i.e., is the tip amount a linear, a concave or a convex function of bill size?). Conlin, Lynn and O’Donoghue (2003) found that bill size affects percentage tip negatively. Similar result was obtained by Chapman and Winquist (1998), who examined the percentage of tips for restaurant meals, haircuts and taxi rides, and observed that smaller bills were associated with larger tip percentage.

There are two potential explanations for the latter result. First, reducing the tip percentage has higher benefit for the customer when the bill is high, so he might tend to tip smaller percentages when the bill is large. Second, suppose that many people tip by computing 15 percent of the bill (or any other constant percentage) and then rounding up the result to the next

integer amount (or to the next integer amount plus the small change they received when paying the bill). Since the dollar amount people round up is the same regardless of bill size, tip percentage is higher for smaller bills.

### Service Quantity

Service quantity has no clear definition, but is generally assumed to reflect the amount of time the waiter dedicates to the table. As such, it is sometimes approximated by the number of dishes ordered in the table (by all diners together). If customers compensate waiters in proportion to their effort, tips should be positively correlated with service quantity. Clearly, when estimating the effect of service quantity on tips, one must control for the bill size, as the two are highly correlated.

Lynn and Grassman (1990) did not find a correlation between the number of courses and tipping. Bodvarsson and Gibson (1997) found statistically significant correlation between service quantity and amount tipped, but the effect of service quantity is very close to zero. Conlin, Lynn and O'Donoghue (2003) found positive correlation between the number of courses in the meal (per diner) and the percentage tip; the coefficient, however, is not statistically significant.

### Group Size

If diners see how much is tipped by the other people at the same table, bigger group can lead to increased social pressure to tip and higher tips. If they do not, however, and there are multiple customers who pay the bill, each one might want to free ride on the tips of others and reduce his tip (when the waiter only sees the total tip and not its division among the customers). The empirical evidence about the effect of group size on tips is mixed.

Lynn and Grassman (1990) found no correlation between group size and tipping. Freeman, Walker, Borden and Latane (1975) examined 396 groups of restaurant diners and concluded that the variation around the norm of 15 percent tip was an inverse power function of group size, i.e. there exists a negative correlation between group size and tip. They claim that the findings are consistent with a theory of division of responsibility. There is another potential explanation, however: customers take into account that it is easier to serve a large group than to serve the same number of people in separate tables, therefore tipping less when they are in a large group (Snyder, 1976).

Conlin, Lynn and O'Donoghue (2003) get an opposite result: percentage tip in their data is positively correlated with group size. Bodvarsson and Gibson (1997) found that the differences in tip percentage between tables of two, three and four diners are not significant, but that lone diners tip more than others. This, however, may be the result of customers computing 15 percent and rounding up the result, as was explained in the discussion about bill size. Indeed, in the regression where tip amount (rather than percentage) is the dependent variable, the result that lone diners tip more is not statistically significant.

### Differences between Countries

One of the puzzling questions about tipping is how it becomes a social norm in some countries but not in others. What are the characteristics of a country that make tipping more likely to be prevalent there? A few studies addressed this question. Lynn (2000) found relationships between the number of tipped professions and national characteristics (positive relationship with level of extraversion and neuroticism and negative with level of psychoticism) in a sample of 21 countries. Similarly, Lynn (1994) concludes that tipping is more prevalent the

higher the country's level of neuroticism<sup>8</sup>. Lynn, Zinkhan and Harris (1993) looked at tipping practices for 33 service professions in 30 countries and found that tipping was less prevalent in countries with low tolerance for interpersonal status and power differences and in countries with values that emphasize social over economic relationships. Tipping was more prevalent in countries with low tolerance for uncertainty and in communistic countries that valued close employee ties to work organizations.

### Interpersonal Connection with the Server

Davis, Schrader, Richardson, Kring and Kieffer (1998) found that significantly higher tips were given when the server squatted rather than stood. The hypothesis behind this result is that when servers squat, they are closer to the customer, which may allow additional eye contact and foster higher rapport and enhanced communication. Lynn and Mynier (1993) corroborated the hypothesis that squatting during the initial visit to the table increases the waiter's tip. Garrity and Degelman (1990) used data from 42 two-person dining parties in a brunch buffet and found that when the server introduced herself by name the tip increased from 15% to 23.4%. Stephen and Zweigenhaft (1986) tested the effect on tipping of a female waitress touching the male customer, the female customer or neither of them, using data from 112 pairs of restaurant customers. Average tips were 13, 15 and 11 percent, respectively. Rogelberg, Ployhart, Balzer and Yonker, (1999) found that server friendliness affected tipping in some cases.

Crusco and Wetzel (1984) report on an experiment in which three waitresses briefly touched customers either on the hand or the shoulder as they were returning change. Customers' reactions

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<sup>8</sup> Neuroticism is strongly correlated with "embarrassability", shame, self-consciousness and anxiety.



were assessed by a restaurant survey and the tip percentage. The tipping rate for the two types of touch did not differ from each other and did not differ according to the customer's gender. Both tipping rates were significantly larger than a control, no-touch group. There were no touch effects on ratings of the waitress, the restaurant's atmosphere, or the dining experience. Crusco and Wetzel concluded that touch effects can occur without awareness. Conlin, Lynn and O'Donoghue (2003) found that friendliness was the server's characteristic that had the most effect on tips.

The above results suggest that people tip more, sometimes significantly, when the waiter behaves in a way that increases the interpersonal connection between him and the customer. The reason for this tipping behavior is probably that people feel more uncomfortable to tip poorly, and more willing to tip generously, when they feel close to the waiter (from the same reason that one is more likely to help a friend than to help a stranger). This can be consistent with both social pressure and fairness as explanations for tipping: the customer might incur increased social pressure and more disutility from being unfair when he feels closer to the server. However, the significance of the closeness to the server is not consistent with future service being a major reason for tipping.

Related to the above are experiments in which the effect of some friendly act of the waiter is recorded. Rind and Bordia (1995) conducted an experiment in which a female server wrote on the back of diners' checks "thank you", "thank you" plus her first name, or nothing. The addition of "thank you" increased tip percentages, although personalization by adding the first name had no effect. Gueguen and Legohérel (2000) found that drawing of the sun on a bill led clients to tip more often and larger amounts. The data included 177 clients who ordered espresso coffee in bars. Since tipping in this situation is less common than in restaurants, the effects of the same

behavior by a restaurant waiter may be substantially reduced, however. Rind and Strohmetz (1999) found that writing a helpful message about an upcoming dinner special on the backs of the checks increased tips from 17 to 20 percent.

### Variables Not Controlled by the Waiter

It is interesting to examine the effects of variables that affect the enjoyment from the dining experience but are not under the control of the waiter. If people tip to receive good service in the future, they should not reward or punish the waiter for factors that he cannot control. If tipping occurs because of social pressure or willingness of customers to be fair, the correlation of tips with such factors depends on what the social norm dictates in this aspect. In addition, if the customer's generosity is affected by his mood, he may tip more when his overall experience is better, even when the improved experience is not caused by the waiter's actions.

The main variable that affects the dining experience but is usually not controlled by the waiter is food quality (as ranked by the customer). Unless the server is so slow that he brings the food cold, or recommends a dish that the customer later dislikes, the waiter has no effect on food quality. Therefore, the customer should not tip according to food quality if his tips are a function of the waiter's effort, but may tip less when food quality is low if his tips depend on his mood. The evidence is not unanimous, however. Lynn and McCall (2000) found significant positive correlation between tip size and food ratings, while Lynn and Grassman (1990) and Lynn and Latane (1984) found no such correlation. Conlin, Lynn and O'Donoghue (2003) found positive and statistically significant correlation between food ratings and tips in some of their specifications, but once patronage frequency is included in the regression, the coefficient on food quality drops to half of its previous size and is not statistically significant anymore. Since the

regression results show that frequent patrons tip more, and they are presumably also those who evaluate the food better on average (this may be the reason why they go to the restaurant often), without controlling for patronage frequency the food quality coefficient might be biased upwards. Therefore, the latter result, where the coefficient is not statistically significant, seems to be more valid.

Rogelberg, Ployhart, Balzer and Yonker (1999) found that food quality affected tipping decisions of college students in some cases, but restaurant cleanliness and atmosphere did not. Harris (1995) found that food quality was related to tip size according to questionnaires given to waiters but not according to customers' responses. This is an interesting result as it implies some kind of bounded rationality in at least one side. If tips are not correlated with food quality, then it might suggest that waiters, consciously or not, prefer to attribute tip variance to reasons that are not under their control (such as food quality), rather than to admit that sometimes they give poor service that results in lower tips. If tips are in fact correlated with food quality, then customers have some sort of bias, as they claim the two are not related.

Seligman, Finegan, Hazlewood and Wilkinson (1985) conducted an experiment with pizza deliverymen, in which customers were told that the pizza would arrive early or late, and were induced to think either that the deliveryman is responsible for the waiting time or that he is not. When customers thought the deliveryman is responsible for the delay, they tipped more for early delivery, but when they thought he does not control the delay, they tipped the same for early and late delivery.

## Factors that Affect Tips in Restaurants - Summary

The average tip is very close to the norm of 15 percent of bill size. Bill size is by far the most important variable in determining tips. Service quality affects tips positively but very little (the difference between mediocre and good service results in tip differences of about 0.5 – 2.5 percent of the bill size). Patronage frequency has a small positive effect on tips. The interaction between patronage frequency and service quality, however, does not affect tips, which might suggest (if waiters correctly evaluate the service quality they provide – a false assumption according to Lynn and McCall, 2000) that future service is not a reason for tipping. Service quantity seems not to be a significant determinant of tip size, despite some conflicting evidence. Group size effect is not clear, since the evidence about it is not unanimous. This is an interesting factor to explore further because it can suggest whether the common practice of restaurants to impose a fixed-percentage gratuity instead of tips on large groups (usually six or more diners) is profit maximizing. The characteristics of the population in a country help to predict how common tipping is in that country. Server's friendliness and interpersonal connection with the customer contributes significantly to tips. The effect on tips of variables that the waiter does not control is mixed.

## **IV. CONCLUSION**

Tipping is an important phenomenon, both because of its economic magnitude and because of the insights it suggests about how social norms and feelings motivate economic behavior in general. Different aspects of tipping are related to several areas in economics. In this paper I provide a summary of the research in this area, along with many original ideas.

Tipping provides many promising research opportunities. One interesting topic is how the norm of tipping evolves. When do we start to tip workers that were not tipped before? Are there reasons that cause us to stop tipping in certain situations? How does tipping in one country affect the custom in another country?<sup>9</sup> Another question worth pursuing is why tips are expected in certain situations but not in others. Why do we tip waiters but not flight attendants? Why don't we tip our lawyers and accountants when we are satisfied with the service they provide us?

Some policy issues arise as well. Should tips be taxed the same way that wages are? Should tipped workers be paid minimum wage in addition to their tips?<sup>10</sup> I hope that this article will encourage additional researchers to contribute to the growing literature about tipping.

## REFERENCES

Azar, Ofer H. 2002a. "Tipping: The Economics of a Social Norm," working paper, Department of Economics, Northwestern University.

Azar, Ofer H. 2002b. "The Social Norm of Tipping: Does it Improve Social Welfare?" Working paper, Department of Economics, Northwestern University.

Azar, Ofer H. 2002c. "Is Future Service a Reason for Tipping? Theory and Evidence," working paper, Department of Economics, Northwestern University.

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<sup>9</sup> The establishment of tipping in the United States, for example, is attributed to travelers who brought the custom from Europe (Segrave, 1998).

<sup>10</sup> Federal minimum wage laws in the United States dictate that a tipped worker can be paid a wage of \$2.13 an hour compared to \$5.15 minimum wage of a non-tipped worker. The total income of a tipped worker from tips and wages, however, has to be at least \$5.15 an hour. Several states adopted state laws that are different from the federal laws.

- Azar, Ofer H. 2003a. "The Implications of Tipping for Economics and Management" (forthcoming in the *International Journal of Social Economics*).
- Azar, Ofer H. 2003b. "Optimal Monitoring with External Incentives: The Case of Tipping," working paper, Department of Economics, Northwestern University.
- Azar, Ofer H. 2003c. "What Sustains Social Norms and How They Evolve? The Case of Tipping" (forthcoming in the *Journal of Economic Behavior and Organization*).
- Azar, Ofer H. 2003d. "The History of Tipping – from Sixteenth-Century England to United States in the 1910s" (forthcoming in the *Journal of Socio-Economics*).
- Azar, Ofer H. 2003e. "Why Do We Tip Waiters but not Flight Attendants? An Empirical Investigation," working paper, Department of Economics, Northwestern University.
- Ben-Zion, Uri and Edi Karni. 1977. "Tip Payments and the Quality of Service," in *Essays in Labor Market Analysis*. Orley C. Ashenfelter and Wallace E. Oates, eds. New York: John Wiley & Sons, pp. 37-44.
- Bodvarsson, Orn B. and William A. Gibson. 1994. "Gratuities and Customer Appraisal of Service: Evidence from Minnesota Restaurants," *Journal of Socio-Economics* 23:3, pp. 287-302.
- Bodvarsson, Orn B. and William A. Gibson. 1997. "Economics and Restaurant Gratuities: Determining Tip Rates," *American Journal of Economics and Sociology* 56:2, pp. 187-204.
- Bodvarsson, Orn B. and William A. Gibson. 1999. "An Economic Approach to Tips and Service Quality: Results of a Survey," *The Social Science Journal* 36:1, pp. 137-147.
- Chapman, Gretchen B. and Jennifer R. Winqvist. 1998. "The Magnitude Effect: Temporal Discount Rates and Restaurant Tips," *Psychonomic Bulletin & Review* 5:1, pp. 119-23.

- Conlin, Michael, Michael Lynn, and Ted O'Donoghue. 2003. "The Social Norm of Restaurant Tipping" (forthcoming in the *Journal of Economic Behavior and Organization*).
- Crusco, April H. and Christopher G. Wetzel. 1984. "The Midas Touch: The Effects of Interpersonal Touch on Restaurant Tipping," *Personality & Social Psychology Bulletin* 10:4, pp. 512-17.
- Davis, Stephen F.; Brian Schrader, Teri R. Richardson, Jason P. Kring, and Jamie C. Kieffer. 1998. "Restaurant Servers Influence Tipping Behavior," *Psychological Reports* 83:1, pp. 223-26.
- Freeman, Stephen; Marcus R. Walker, Richard Borden, and Bibb Latane. 1975. "Diffusion of Responsibility and Restaurant Tipping: Cheaper by the Bunch," *Personality & Social Psychology Bulletin* 1:4, pp. 584-87.
- Garrity, Kimberly and Douglas Degelman. 1990. "Effect of Server Introduction on Restaurant Tipping," *Journal of Applied Social Psychology* 20:2, pp. 168-72.
- Gueguen, Nicolas and Patrick Legohérel. 2000. "Effect on Tipping of Barman Drawing a Sun on the Bottom of Customers' Checks," *Psychological Reports* 87:1, pp. 223-26.
- Harris, Mary B. 1995. "Waiters, Customers, and Service: Some Tips about Tipping," *Journal of Applied Social Psychology* 25:8, pp. 725-44.
- <http://www.tipping.org/>
- Jacob, Nancy L. and Alfred L. Page. 1980. "Production, Information Costs and Economic Organization: The Buyer Monitoring Case," *American Economic Review* 70:3, pp. 476-78.
- Kahneman, Daniel; Jack L. Knetsch, and Richard Thaler. 1986. "Fairness as a Constraint on Profit Seeking: Entitlements in the Market," *American Economic Review* 76:4, pp. 728-741.

- Lynn, Michael. 1994. "Neuroticism and the Prevalence of Tipping: A Cross-Country Study," *Personality & Individual Differences* 17:1, pp. 137-38.
- Lynn, Michael. 2000. "National Personality and Tipping Customs," *Personality & Individual Differences* 28:2, pp. 395-404.
- Lynn, Michael. 2001. "Restaurant Tipping and Service Quality: A Tenuous Relationship," *Cornell Hotel and Restaurant Administration Quarterly* 42:1, pp. 14-20.
- Lynn, Michael and Bibb Latane. 1984. "The Psychology of Restaurant Tipping," *Journal of Applied Social Psychology* 14:6, pp. 549-61.
- Lynn, Michael and Andrea Grassman. 1990. "Restaurant Tipping: An Examination of Three 'Rational' Explanations," *Journal of Economics Psychology* 11:2, pp. 169-81.
- Lynn, Michael and Kirby Mynier. 1993. "Effect of Server Posture on Restaurant Tipping," *Journal of Applied Social Psychology* 23:8, pp. 678-85.
- Lynn, Michael; George M. Zinkhan, and Judy Harris. 1993. "Consumer Tipping: A Cross-Country Study," *Journal of Consumer Research* 20:3, pp. 478-88.
- Lynn, Michael and Jeffrey Graves. 1996. "Tipping: An Incentive/Reward For Service?" *Hospitality Research Journal* 20, pp. 1-14.
- Lynn, Michael and Michael McCall. 2000. "Gratitude And Gratuity: A Meta-Analysis of Research on the Service-Tipping Relationship," *Journal of Socio-Economics* 29:2, pp. 203-14.
- Lynn, Michael and Tony Simons. 2000. "Predictors of Male and Female Servers' Average Tip Earnings," *Journal of Applied Social Psychology* 30:2, pp. 241-52.



- Rind, Bruce and David Strohmetz. 1999. "Effect on Restaurant Tipping of a Helpful Message Written on the Back of Customer's Checks," *Journal of Applied Social Psychology* 29:1, pp. 139-44.
- Rind, Bruce and Prashant Bordia. 1995. "Effect of Server's "Thank You" and Personalization on Restaurant Tipping," *Journal of Applied Social Psychology* 25:9, pp. 745-51.
- Rogelberg, Steven G.; Robert E. Ployhart, William K. Balzer, and Robert D. Yonker. 1999. "Using Policy Capturing to Examine Tipping Decisions," *Journal of Applied Social Psychology* 29:12, pp. 2567-90.
- Ruffle, Bradley J. 1998. "More Is Better, But Fair Is Fair: Tipping in Dictator and Ultimatum Games," *Games and Economic Behavior* 23, pp. 247-265.
- Ruffle, Bradley J. 1999. "Gift Giving with Emotions," *Journal of Economic Behavior and Organization* 39:4, pp. 399-420.
- Schwartz, Zvi. 1997. "The Economics of Tipping: Tips, Profits and The Market's Demand-Supply Equilibrium," *Tourism Economics* 3:3, pp. 265-79.
- Segrave, Kerry. 1998. *Tipping: An American Social History of Gratuities*. Jefferson: McFarland & Company.
- Seligman, Clive; Joan E. Finegan, Douglas J. Hazlewood, and Mark Wilkinson. 1985. "Manipulating Attributions for Profit: A Field Test of the Effects of Attributions on Behavior," *Social Cognition* 3:3, pp. 313-21.
- Sisk, David E. and Edward C. Gallick. 1985. "Tips and Commissions: A Study in Economic Contracting," Federal Trade Commission Bureau of Economics Working Paper 125.

Snyder, Melvin L. 1976. "The Inverse Relationship between Restaurant Party Size and Tip Percentage: Diffusion of Responsibility or Equity?" *Personality & Social Psychology Bulletin* 2:3, pp. 308.

Stephen, Renee and Richard L. Zweigenhaft. 1986. "The Effect on Tipping of a Waitress Touching Male and Female Customers," *Journal of Social Psychology* 126:1, pp. 141-42.

U.S. Census Bureau, *Statistical Abstract of the United States: 2001*.

Woodhead, Robert. 2000. "Tipping - a Method for Optimizing Compensation for Intellectual Property," on-line at <http://tipping.selfpromotion.com/>